ASL

Australian Society for Limnology Inc.

NEWSLETTER

Conference Edition

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AUSTRALIAN SOCIETY FOR LIMNOLOGY INC.

The Australian Society for Limnology Inc. (ASL) is an Australian-based scientific society whose focus is the study and management of inland waters. The ASL was established in 1961, and has a current membership of over 650 researchers, managers, engineers, teachers and tertiary level students from all states and territories. Members have a strong professional interest in inland aquatic issues, including the maintenance of biodiversity, the maintenance and/or restoration of water quality, and the wise use of aquatic resources. The Society also has a strong interest in fostering the scientific and intellectual development of tertiary students.

The Society includes members working in government agencies, tertiary institutions and many industries related to aquatic resources. Through their daily activities, members have contact with local communities and are in a sound position to interpret and advise on inland water issues. The Society has a substantial knowledge base, and has assumed a responsibility to ensure that this is available to those who manage inland waters.

Accordingly, the charter of the ASL is to further our understanding of Australia's inland waters and to promote their wise use and sustainable management. In this manner we will contribute to the continued existence of this valued resource and the maintenance and enhancement of the quality of life for all Australians. The ASL regularly produces a newsletter with notes on limnological activities, articles of interest, book reviews and announcements of upcoming events likely to be of interest to Members.

ASL Home Page - http://www.asl.org.au/

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CONTENTS

CONTENTS	4
EDITORS NOTE	5
PRESIDENT'S REPORT	6
ASL ANNOUNCEMENTS	7
GENERAL ANNOUNCEMENTS	9
HOT OFF THE PRESS	17
OBITUARY: Dr Christy Fellows	19
BITE SIZED BITS OF SCIENCE	20
NEW SECTION: ASL ARCHIVES	22
RETIREMENT: Dr Tomi Petr	23
MINUTES – ASL Teleconference	24
MEMBERS MUSINGS: ASL Meetings (Belinda Robson)	27
REPORTS FROM THE TRENCHES	28
ASL VOLUNTEERS	41
ASL SUBSCRIPTIONS	45
REGIONAL EXECUTIVE MEMBERS 2008	46

EDITOR'S NOTE

Merry Christmas folks, I hope that you have had an enjoyable year in limnology and get to have a well-earned break with friends and family.

Of great sadness in this issue is the passing of Christy Fellows, a wonderful limnologist and a truly lovely person. Stuart Bunn has written a more appropriate tribute later in this edition, so I will be brief now. I greatly enjoyed meeting Christy on a number of occasions, including when she visited here at Monash. She was (obviously) intelligent, and we had some great chats about collaborations and ideas for future research. More than that though, she was a genuinely friendly and engaging person, quick to laugh, and with an affinity for people. We have suffered a very real loss to our community, and I pass on my personal condolences to Christy's family, friends and colleagues.

On a more pleasant note, please look for an announcement (p 7) of an initiative to write a history of ASL. This will in the first instance be launched by a new section in each edition of the newsletter reviewing the history of the Society, and inviting your comments and contributions – look out for it!!

I look forward to a coming year of many interesting and no doubt hysterically amusing or deeply thought provoking contributions to your newsletter. The newsletter is only as good as you make it (any idiot can cut and paste, as I prove edition after edition). So thank you so much to those contributors for the year, I really do appreciate your time – and really do apologise for the editorial mistakes, omissions and general cock-ups that I have been known to introduce.

Once again, have a wonderful Christmas and a very Happy New Year.

The deadline for submissions to the next issue is 15th March 2009.

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PRESIDENT'S REPORT

It is with great sadness that I have to report the untimely death of Dr Christy Fellows of Griffith University. Everybody who knew Christy was touched by her enthusiasm, professionalism, skill and wonderful smile. She was a great person to work with and will be sorely missed. On behalf of the Society I would like to offer our condolences to her husband Wade and son Eli, and let them know they are in our thoughts.

On the management front, ASL has always been run by the tireless effort of volunteers. While I am sure volunteerism will always remain a cornerstone of the way the society does business, we are all becoming more and more busy. At the last Annual General Meeting of the society, held in conjunction with the Mandurah Congress, the possibility of outsourcing some of the secretariat functions of the Society was discussed. I am happy to announce that ASN Events will be working in partnership with the ASL Executive to deliver a number of services essential to the operation of the Society. In addition to hosting the ASL web page, ASN events will assist with the 2009 and 2010 Congresses, assist Sabine in the financial reconciliation and reporting of the Society, assist Ross with the preparation of the newsletter and, manage the Society's membership list. Undoubtedly there will be number of hiccups during the transition, but nothing that can't be addressed. I really believe that these new arrangements will allow the Society to remain a strong and relevant organisation in these changing times.

Finally, I would like to take this opportunity to publically thank Prof. Stuart Bunn for all the work he has done over the past two years as president of the Society.

Darren Baldwin

ASL ANNOUNCEMENTS

A HISTORY OF ASL – CALL FOR CONTRIBUTIONS

A group of ASLers (Andrew Boulton, Ian Bayly, Fiona Mackenzie-Smith, John Harris and Richard Marchant) are compiling a history of ASL for ultimate publication in some form in 2012 to coincide with the Society's 50th anniversary. So far, the lion's share of the work has been done by Ian Bayly and Alan Weatherley to produce text on the first decade of the Society. The authors would now like to:

a) encourage comments and additions from the other members on this text to date, and

b) solicit material (text and photographs) about people, events, meetings and themes that have been important in ASL since the early 1960s. They are hoping that the work by Ian and Alan will inspire contributions and plan to add bits as they go along.

NOTE FROM THE EDITOR: In coming editions of the ASL newsletter we will publish sections on the history of the society in a new section called 'ASL Archives' which will detail the history of the society. I hope that everyone will contribute to this section, and comment on the contributions.

MODIFICATIONS TO THE ASL MEDAL REGULATIONS

The ASL executive has changed two aspects of the current rules (revised in 1998 and published in ASL newsletter vol 36, number 2) for awarding medals. These concern the length of time a nomination is valid for and the requirement for the medal winner to publish their Hilary Jolly Memorial Lecture. The executive has decided that nominations should be valid for three years and that the requirement to publish the Hilary Jolly address should be abandoned.

Richard Marchant

THE 2009 ASL INTRA-CONTINENTAL LIMNOVENTURE (working title)

The 2009 ASL congress is going to be held in Alice Springs. A cynical observer might discount this as a predictable addition to the recent string of far flung congress locations in what seems to be a wishlist travel itinerary set by a bunch of well funded academics to the exclusion of our more fiscally challenged members - particularly students.....It doesn't have to be this way.

A bunch of ASL people have had a cool idea that breaks down like this:

1. Get a bus
2. Fill it with students and other deserving types (the buspeople)
3. Drive it to Alice Springs stopping off at important limnological sites along the way
4. Chat to clever people along the way
5. Get some form of funding and sponsorship for the whole thing so it costs about the equivalent of an ASL congress held in a major capital

Even before the 2008 congress had wound up there was the beginnings of a student organising committee.... but we are going to need help. To convert this from a daft idea to an actual factual road trip will involve lots of help from lots of people.....fortunately that's partly what ASL is all about...isn't it?

This is a call for expressions of interest. We need your input.

- Where should the bus go? - It will probably start somewhere on the east coast between Adelaide and Brisbane (yet to be decided)
- Can you recommend things to visit? (This bit is really important! - Lake Mungo or Eyre, The Snowy or Murray Rivers, a snazzy dam with an interesting management regime, a saltlake, a wetland, a farm dam....a big one)
- Can you suggest places to put tents (up to fifty I guess...how big is a bus?) preferably near limnological features?
- Do you own a vineyard or brewery?
- Can you regale the buspeople with talks?
- Can you hook them up with a local CWA for morning tea
- Can they visit you research centre?
- Can they crash one of your field trips on the way?
- Are you practised at shiatsu massage and unworried by the thought of working on 30 people who have spent 2 days on a bus...?

Or would you like to be on the bus? .....you should contact us too.
If you want to be involved in any way at all, we want to hear from you.

Send us an email at: flatworm@ozemail.com.au (temporary contact - 'til things are in full swing).

John Gooderham

GENERAL ANNOUNCEMENTS

TAXONOMIC WORKSHOP AT ALBURY-WODONGA

National Taxonomy Hub
building australian capacity

Aquatic Macroinvertebrates Research Project

Date: February 10th – 11th 2009

Where: La Trobe University, Albury-Wodonga Campus
Wodonga

Topics:

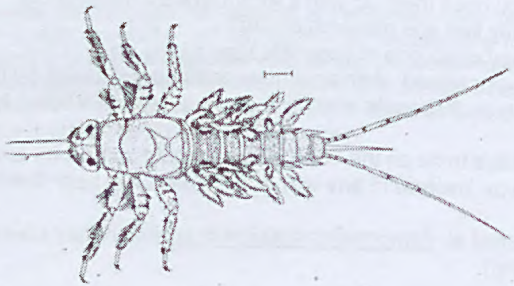
Larval Chironomidae
Nymphs of Coloburiscidae and taxonomic updates
The Bug Guide
Interactive key to Family for adult insects
Oligochaeta - Naidinae

Presenters

Mr Chris Madden
Dr Phil Suter
Dr David Yeates
Mr John Hawking
Mr Adrian Pinder

Registration form available at

http://www.latrobe.edu.au/deme/aw/taxonomicworkshop.htm



AUSRIVAS COURSE NOW ENROLLING:

MODULE 1 TO START IN FEBRUARY

The AUSRIVAS Online training course is offered twice a year by the eWater CRC and the University of Canberra. The course aims to teach the skills and knowledge needed to assess river health to an acceptable standard using the Australian River Assessment System (AUSRIVAS) methods. Those who complete its requirements successfully are eligible for accreditation from the relevant state or territory agency.

There are no prerequisites for this non-award course, other than registration and payment. The theoretical knowledge required to use AUSRIVAS for river health assessment can be learnt entirely online in four interactive modules that can be completed at you own pace over 12 weeks. A 4-day practical face-to-face workshop is offered as a fifth module, teaching the practical skills required. The workshop module is held in Canberra but **would you like us to hold a workshop in your state?** If there is sufficient demand from a group or agency we can arrange a workshop in any State or Territory.

The first module of the next AUSRIVAS Online course is scheduled in late July and is enrolling now! If you would like to enroll in the course or any individual module please contact Sue Nichols at sue.nichols@canberra.edu.au for more information or queries regarding a workshop outside the ACT.

http://ausrivas.canberra.edu.au/Bioassessment/Macroinvertebrates/Training/

It is also time to enrol in Watercourses Online!!

- Brush up your knowledge about the ecology of Australian river systems and how they are affected by catchment land-use and other human disturbance.
- Find out how to apply the national water quality monitoring guidelines to waterways, and for State of the Environment reporting.
- Watercourses Online is a growing set of online training courses, designed primarily to support personnel in water management, natural resources management, environmental education and ecological consulting.

The 3 courses currently offered are:

- Ecology and River Function
- Catchments: their Character, Waters & Chemical Composition
- Waterway Assessment

Find more details by following the links from http://freshwater.canberra.edu.au

Or contact

Professor Richard Norris, phone 02 6201 2543 email richard.norris@canberra.edu.au

Sue Nichols, phone 02 6201 5408, email sue.nichols@canberra.edu.au

Professor William Maher (for Catchments module only), phone 02 6201 2531, email bill.maher@canberra.edu.au

Participants from the 2008 AUSRIVAS workshop held at the Cotter River, ACT.

SYMPOSIUM

USA Water Management Project Wins AUD$350,000 in 2008 International Thiess Riverprize

A groundbreaking river management project initiated by St. Johns River Water Management District in Florida has won the prestigious AUD$350,000 International Thiess Riverprize – the world's largest award in its field and presented in partnership by International Riverfoundation (IRF) and Riverfestival.

St. Johns River Basin was announced as the winner at the International Thiess Riverprize Presentation Dinner tonight at the Brisbane Convention and Exhibition Centre during the 11th International Riversymposium (1 to 4 September 2008).

Riverprize Judging Panel Chair, Professor Paul Greenfield, said the groundbreaking results achieved by the St. Johns Water Management District were outstanding and those involved in delivering the project should be very proud of their efforts.
"The St. Johns River Basin Project is a large wetlands restoration initiative which addresses environmental degradation and flood control in the headwater region of the St. Johns River," Professor Greenfield said. "It is one of the largest river restoration projects in the United States and has been a 30 year collaboration between State and Federal water managers. The Project uses innovative

approaches in design and management to combine environmental benefits with flood control over 60km of river length and 60,000ha of floodplain. The inspirational outcomes of this initiative exemplify the spirit of the International Thiess Riverprize and it's an honor to reward a project that has done such a brilliant job taking river and water issues into its own hands and delivering such exceptional results. 2008 marks the 10th year of the International Thiess Riverprize and it's inspiring to see such dynamic projects across the world improving our waterways' ecological sustainability year in and year out," he said.

St. Johns River Basin was chosen over two other outstanding international finalists which included Lake Macquarie in New South Wales and the Swan Canning River System in Western Australia.

The Thiess Riverprize is a partnership between International Riverfoundation and Riverfestival - a dynamic ten day event in celebration of Brisbane's river, people, culture and environment held from 29 August to 7 September 2008.

For further information on the 2008 International Thiess Riverprize visit www.riversymposium.com

2009 NABS ENDOWMENT STUDENT AWARDS APPLICATION PROCEDURES

The Board of Trustees of the NABS Endowment Fund encourages students to apply for the 2009 Endowment Awards. The awards are designed to support student research. There are no restrictions on how the funds can be spent, but it assumed that disbursements will be directly related to research leading to student degree programs, including travel to the NABS meeting. The application procedure and guidelines are below. The application MUST be received by 12 January 2009, and applicants will be notified of the outcome of the competition by early March 2009. If you have any questions, contact the committee chair (Jack Webster) via e-mail (jwebster@vt.edu).

NABS Endowment Awards and Application Procedures: NABS Endowment Awards recognize excellence among our student members. These awards are based on merit and are highly competitive. Approximately 15 awards will be granted and are supported by 5 named funds. The 5 funds and the eligibility criteria are described below. The number and dollar value of each award will vary depending on the money available in each fund – the information below is based on previous years' awards.

Description of the Funds:
1. General Endowment Fund. To support any area of research (10 Awards at $600.00 each).
2. The Simpson Fund. To support research in applied issues (1 award at $600.00).
3. The Boesel – Sanderson Fund. To support research on the natural history of organisms (1 award at $600.00).
4. The Americas Fund. To provide a travel award for a student from Latin America (1 award at $1200.00).

5. The Petersen Fund. To provide travel awards for non-North American students (2 awards at $1200.00 each).

Eligibility:

1. Applicants must be CURRENT STUDENT members of NABS.
2. Student award winners should be present at the annual meeting to receive the award.
3. Students will only be eligible for one award during a specific degree program, i.e., only one during a B.S., B.A., M.S. or Ph.D. degree.
4. A student cannot receive both an Endowment Award and Conservation Committee Award in the same year.
5. Students may apply for only one award in an award year and must identify the fund (Award) for which they wish to apply.
6. Applicants must supply confirmation of graduate standing by the major professor/advisor.

Instructions:

The awards will be granted on the basis of a description of the research or proposed research. This should be a clear, concise description of objectives or hypotheses, description of methods, preliminary or expected results, and significance of the research. The latter should be a brief explanation of the broader significance of the work to contemporary issues in benthic science. The full description (including significance) should not exceed ONE PAGE. Citations are not necessary, but up to three citations may be included on a separate page. Applications will be reviewed and judged by the 5-member Board of Trustees. Letters of recommendation are NOT requested and will not be considered, but the student's major professor must send a separate e-mail confirming the applicant's information and eligibility for the award. The application should be prepared as a pdf file and attached to an e-mail to jwebster@vt.edu with a subject line of "NABS Endowment Application".

The application should be in the following format:

Page 1 -- Applicant's Information:
- Name:
- Title of the research:
- Award being applied for (see award descriptions above):
- Institution:
- Mailing address:
- Telephone number:
- E-mail address:
- Degree program (B.S., B.A., M.S., or Ph.D.):
- Number of years in current program:
- Number of years as a NABS student member:
- Major professor's/advisor's name:

Page 2 – The body of the application (minimum 11 pt font, 1" margins)
Page 3 – No more than three literature citations in J-NABS format.

2009 NABS Graduate student conservation research award

The Conservation and Environmental Issues Committee (CEIC) is pleased to announce the annual Graduate Student Conservation Research Award competition for support of the best graduate student research proposal addressing at least one of the following criteria: 1) advancing knowledge of the biology or ecology of an endangered or threatened species or ecosystem; 2) advancing knowledge of conservation of biodiversity at any or all levels of organization (from genes to ecosystems); 3) developing a plan to conserve an aquatic species or ecosystem; or 4) supporting or implementing the conservation or restoration of an impaired or threatened species or ecosystem. Proposals that do not directly address one or more of these criteria will be ineligible for this competition.

The Conservation Research Award is possible because of the highly successful CEIC slide sale effort. Portions of the proceeds from the sales of slide sets are invested in the NABS Endowment Fund, and are then matched by the Society. Thus, students who receive one NABS endowment award will NOT be eligible for other endowment awards in 2009. We anticipate awarding two $750 grants for 2009, and announcing award winners in mid-March.

Eligibility:

1. Applicants must be CURRENT STUDENT members of NABS.
2. Only graduate students are eligible to apply.
3. Applicants may receive only one award during their student career.
4. Project must be on-going or to be initiated upon recite of award

Instructions:

Please submit all proposal materials as pdf files.

The proposal should consist of 4 parts: Part 1 should contain applicant information, part 2 consists of the project description, part 3 is the reference section, and Part 4 provides a budget and budget explanation.

Part 1. Include the following applicant information: Name, institution, mailing address, telephone/fax number, email address, current degree program (M.S. or Ph.D.), number of years in current degree program, major professor/advisor's name, project title.

Part 2. The project description must be limited to two single-spaced pages (excluding references) written in 12 point font with standard 1" margins on all sides and should contain sufficient detail for evaluation. Project descriptions should include a clear, concise description of objectives, hypotheses, methods, anticipated results, and significance of the research.

Part 3. A separate letter from the applicant's major professor/advisor confirming graduate status must be submitted directly to Donna Kashian.

Part 4. The budget must contain sufficient detail and explanation of the purpose for which the award will be used. The following items are typically supported: Living expenses in the field or at a research station; travel to study sites (if via automobile, an allowance of $0.45 (U.S.)/mile may be used to estimate costs); consumable supplies or expendable equipment. The following items will not be supported: salaries, manuscript preparation and publication costs

Applicants lacking any of the requested information will not be reviewed.

Application deadline

Application materials should be submitted in electronic form by 15 February 2009 to: Donna Kashian (Donna.Kashian@noaa.gov). The subject line of the email should read: CEIC Research Award Proposal.

All applications will be reviewed by a non-student committee of reviewers appointed by the CEIC committee chairs, and proposals will be rated based on the criteria described above. Award decisions will be made by 28 March 2009 and announced at the Business Luncheon of the 2009 Annual Meeting. The NABS Conservation Fund should be acknowledged for providing funds in support of research.

NABS Diversity Forum: Critical Watershed Issues for Under-represented Minorities in North America

Inviting faculty, students and professionals who would like to:

1. engage in discussions about freshwater issues particularly relevant to under-represented minority communities,
2. explore how we recruit and retain under-represented minorities in our Discipline, and
3. help develop mentor relationships for students from these groups.

The morning session will feature colleagues with background and varied experiences working with under-represented groups. The tentative program is:

Rhea Graham, Senior Water Resources Project Manager EDAW Inc.
"Planning and Marketing for Climate Change"

Chris Swan, Dept. of Geography & Environmental Systems
University of Maryland, Baltimore County and Baltimore LTER
"Biodiversity in Urban Ecosystems: Coupled Human, Spatial and Metacommunity Processes in Riverine Ecosystems"

Roger Haro, University of Wisconsin-LaCrosse
"Natural Resources and Under-represented Minorities in the Great Lakes Region"

David Close, Director, Aboriginal Fisheries Research Unit, University of British Columbia
"Perspectives of Indigenous Peoples in Conserving Biota"

Following lunch there will be discussions of effective recruitment that will explore what worked and what didn't from student and recruiter perspectives. Federally funded initiatives including NSF IGERT programs will be featured.

"What Worked for You?" A graduate student panel discussion
"Report Card From Agencies" Representatives of federal agencies
"Report Card From Academia" Panel of NABS faculty

Mentor partnerships between current and incoming graduate students will be established during this forum. We hope to create a network that will support new members from under-represented groups during and after this annual NABS meeting.

Faculty and students interested in participating are encouraged to contact Judy Li. (lijunk@comcast.net). Graduate students and members of the GRC interested in serving a mentors please contact
Asako Yamamuro (yamamuro@science.oregonstate.edu), graduate student representative on our committee.

Peter Cullen Postgraduate Scholarship

The NSW Government has developed a postgraduate scholarship in honour of the late Professor Peter Cullen AO FTSE.

The program is jointly funded by various New South Wales Government Water Agencies, including the Department of Water and Energy, Sydney Catchment Authority, State Water, Hunter Water and Sydney Water.
The aim of the scholarship is to:

* Improve our understanding of how rivers, groundwater, wetlands and estuaries function and respond to enhanced management
* Improve the linkages between water science and water management in NSW
* Provide research opportunities for water specialists in NSW.

Funds available:
A three year scholarship of up to $20,000 p.a. will be awarded each of the years 2009-2011.

Funds totalling $60,000 will be available to the successful student over a three year period, but with a sufficient prior written request the allocated funds could be extended to a fourth year.

The scholarship may form part of a stipend and/or support student research. The scholarship can be used to pay for equipment, field expenses, sample processing etc.

For further information see
http://www.dwe.nsw.gov.au/about/scholarship_general_information.shtml

HOT OFF THE PRESS: NEW BOOKS

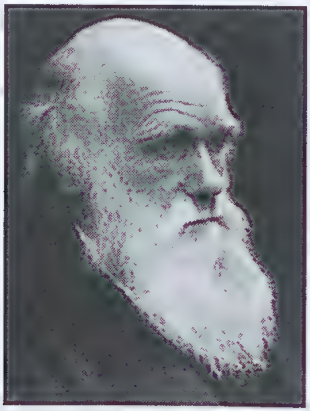
HISTORY OF CHARLES DARWIN PUBLISHED

Tim Berra's new book on Charles Darwin is now available:

Tim M. Berra. 2009. Charles Darwin: The Concise Story of an Extraordinary Man. Johns Hopkins UniversityPress, Baltimore. 116 pp. 60 b/w and 16 colour illustrations.

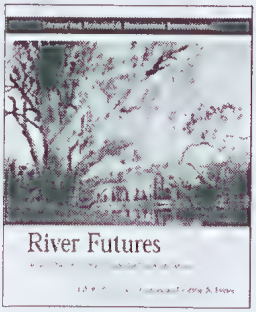
This hardcover book is available for US$13.57 (list $19.95) on Amazon.com. Its small size makes it an ideal stocking stuffer for Christmas.

Tim will be giving a lecture of the same title at Charles Darwin University in Darwin, NT as part of their bicentennial celebrations on 22 Sept. 2009.



ISLAND PRESS

River Futures: An Integrative Scientific Approach to River Repair



Edited by Gary J. Brierley and Kirstie A. Fryirs

Gary J. Brierley is a professor in the School of Geography, Geology, and Environmental Science at the University of Auckland in New Zealand. Kirstie A. Fryirs is a lecturer in the Department of Physical Geography at Macquarie University in Sydney, Australia.

Rivers and streams represent some of Earth's most altered ecosystems. Across much of the planet, rivers bear little relation to the way they looked - and functioned - in the not-too-distant past. Rivers that were physically transformed and ecologically ruined to facilitate industrial and agricultural development are now the focus of restoration and rehabilitation efforts around the world. River Futures: An Integrative and Scientific Approach to River Repair (Island Press, June 27), edited by Gary J. Brierley and Kirstie A. Fryirs, discusses the emergence of this new era of river repair and documents a biophysical framework for river science and management. River Futures provides a holistic overview of considerations that underpin the use of science in river management, emphasizing cross-disciplinary understanding that builds on a landscape template. River Futures also features case studies that explore practical applications in different parts of the world, highlighting approaches to the use of integrative river science, measures, of success, and steps that could be taken to improve performance in future efforts. Anyone involved in river restoration and management, including restorationists, scientists, managers, and policymakers, as well as undergraduate and graduate students, will find River Futures to be a valuable resource.

River Futures is the newest volume in The Science and Practice of Ecological Restoration series, published by Island Press in collaboration with the Society for Ecological Restoration International. The series offers a foundation of practical knowledge and scientific insight that will help ecological restoration become the powerful reparative and healing tool that the world needs. To learn more about the series and to download the free SER Restoration Reader, please visit: http://www.islandpress.org/ser/index.html

FOR ADDITIONAL I NFORMATION

To request review copies, or to arrange an interview with Gary J. Brierley and Kirstie A. Fryirs, please contact John Cangany at 202-232-7933 x 24 or via email at jcangany@islandpress.org. If you review or otherwise mention River Futures in your publication, please forward two tear sheets to: John Cangany, Island Press, 1718 Connecticut Avenue, NW, Suite 300, Washington, DC 20009

Vale Dr Christine (Christy) Fellows

We were devastated by the news of the sudden passing of our dea r friend and colleague, Dr Christy Fellows. Christy joined our group at Griffith in early 2000. I had been searching for a bright, energetic postdoctoral fellow and she had come highly recommended. Christy had completed her science degree with Honours in Biology and Geology (Summa Cum Laude) at the University of Maryland, followed by a PhD at the University of New Mexico, supervised by Dr Cliff Dahm. She soon exceeded all of our expectations – initiated a new program of research on nutrient cycling in riparian zones, attracted significant external funding and forged new collaborations with government agency scientists. She also joined us on our many expeditions to the arid zone of Australia – managing to maintain a dazzling smile and good humour, despite the heat, flies and grumpy company. (She once even convinced me to miss the televised AFL grand-final so that I could help her with an all-day experiment in a muddy waterhole). I learned a lot from her about nutrient cycling and ecosystem metabolism.

Christy became a Lecturer in the School of Environment in 2003 and immediately made an impression as a dedicated and passionate educator – as evidenced by consistent high teaching evaluations, a Faculty teaching award and teaching grants. She began to nurture a new generation of researchers as a supervisor of a devoted team of postgraduate students, and she also was tremendously active in promoting environmental science to high school students through campus visits and at university events. These considerable efforts did not go unnoticed and she was recently offered a tenured position.

Christy clearly made a lasting impression on all of those she met. Messages from colleagues and friends have noted ... "her infectious enthusiasm", "her sharp intellect" and "sparkling personality" ... "She was a gem", she was "vibrant, dynamic and sparkly". She was this and much more – and we will miss her dearly. Our love and thoughts are with her husband and friend Wade Hadwen and their son Eli.

Stuart Bunn
December 16, 2008

Bite sized chunks of science...

A Pandora's box of new species in the heart of Kakadu

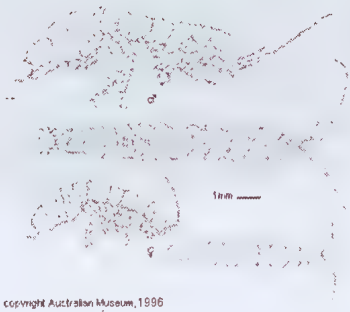
More than 30 new species of isopod crustaceans (shrimp-like invertebrates) in the genus Eophreatoicus have been discovered in the numerous creeks and springs that lie within an area of Kakadu National Park earmarked for further uranium mining. The Australian Museum's isopod expert, Dr Buz Wilson, and colleague Dr Chris Humphrey from the Environmental Research Institute of the Supervising Scientist, identified the isopods as part of a broader environmental due diligence project monitoring freshwaters around Kakadu National Park. These morphological discoveries were subsequently enhanced by genetic research done in the Australian Museum's DNA lab, with the assistance of Dr Don Colgan, Ms Karen Gray and Dr Rebecca Johnson.

These isopods pose an interesting puzzle as to why they have differentiated into many separate species in a limited geographical area. Buz & Chris think that the answer may lie in past periods of dryness, when the waters of the area would have contracted, isolating groups of isopods for significant periods of time and allowing morphological differences to emerge. Whatever past factors led to the many variations of these isopods, their future is uncertain - if uranium mines proceed, the currently pristine freshwater habitats of these newly discovered isopod crustaceans in the genus Eophreatoicus may be degraded. Link:
http://www.personal.usyd.edu.au/~buz/Eophreatoicus.html

NZ Southlands Isopods are everywhere!

Drs Graham Fenwick (NIWA, Christchurch) and Buz Wilson (Australian Museum) who have written about NZ isopods together before (Wilson G.D.F., Fenwick G. D. 1999. Taxonomy and Ecology of *Phreatoicus typicus* Chilton (Isopoda, Phreatoicidea). Journal of the Royal Society of New Zealand 29(1):41-64. (PDF available at: http://www.rsnz.org/publish/jrsnz/1999/3.pdf)
are continuing their project on the conservation values of the NZ southlands species of Notamphisopus (isopod crustaceans). They have collected specimens all of the type localities, and have substantially increased the known distribution of the genus. The current taxonomy has only 6 species, but additional undescribed species have been found in the collection. As of December, Graham & Buz are working on an interactive key to the populations. An additional bit of excitement arose this week when Graham revealed specimens collected earlier this year of a new genus that has eyes (all other NZ species are blind). Buz thinks the new genus might be related to Paraphreatoicus, which occurs in Tasmania.

George D.F. (Buz) Wilson
Australian Museum
(Marine Invertebrates)



copyright Australian Museum, 1996

New localities for *Hemiphlebia mirabilis*

The damselfly *Hemiphlebia mirabilis* has a special status for Victorians: it is listed under our Flora & Fauna Guarantee Act and has been promoted as an iconic conservation flagship species. Internationally it has provided numerous base pairs of DNA and is sought photographically by those who make the long trip Downunder.

It was originally known from Alexandra where it is now extremely rare, if not extinct, but it was later found in good numbers at two or three sites at Wilsons Promontory. Discoveries at Mount William National Park in NE Tasmania in 1992 represented a very large extension to the known range, even if it did cost Victoria its only endemic odonate. Matching the geology of Wilsons Prom and Mount William suggested that it should be found on Flinders Island and, subsequently, it was.

Ranking with the Tasmanian discovery, which completely changed our views on the distribution of this species, are the unequivocal photographs taken by Reiner Richter at Long Swamp in the Discovery Bay Coastal Park, over 400 km to the west of previously known localities. The habitat sounds similar to that of Wilsons Promontory. Reiner has been actively photographing Victorian dragonflies over the last two or three seasons and this latest find can be found at: http://photos.rnr.id.au/2008/12/14/

Department of Sustainability & Environment senior staff have been notified of the discovery and recognise its importance.

There is a lot of coastal habitat in Victoria, as yet unexplored for this cryptic species so a challenge awaits. Superficially, the habitat of the Alexandra and Yea populations seems different for they are in the billabongs of the Goulburn River floodplain. It would be nice to ascertain the common features, and to see if they extend towards the Coorong.

Join me in celebrating this new discovery and congratulating the discoverers.

Ian Endersby

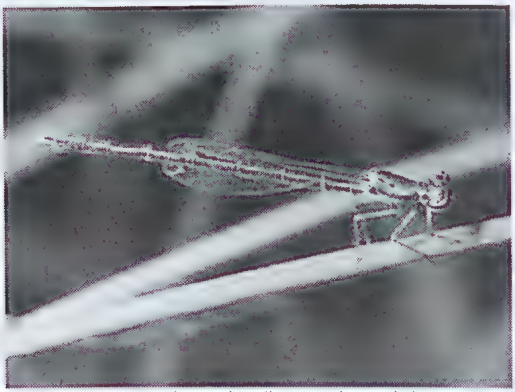


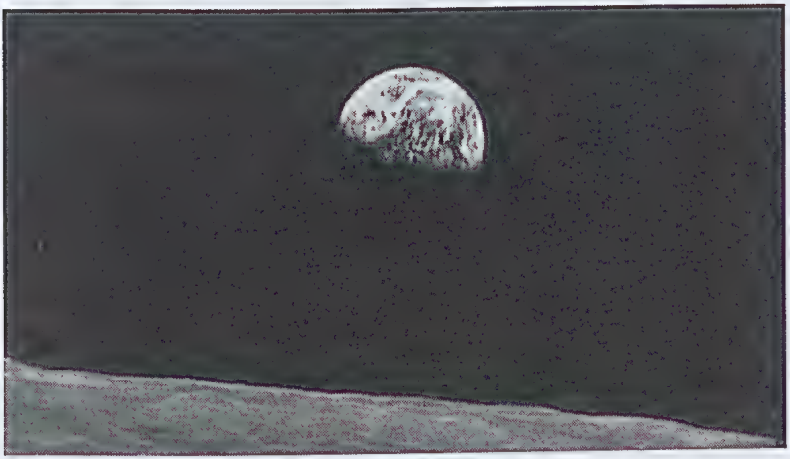
Image: http://www.ecology-solutions.com.au/

ASL ARCHIVES

Your contributions are invited for 'The ASL History Project' being compiled by **Andrew Boulton, Ian Bayly, Fiona Mackenzie-Smith, John Harris** and **Richard Marchant**. Starting with the next edition, contributions are invited to this section of the newsletter detailing the history of the Society. Contributions should be no more than 1500 words and it would be great if they could be illustrated with photos from the dusty past of ASL.

Contributions are due as usual for the newsletter on the 15th of the month of publication (ie for the next edition, 15th March)

WATCH THIS SPACE



RETIREMENT: Dr Tomi Petr

This article was intended for the previous edition – apologies for the oversight. Ed.

Australia, Monash University, PNG and the Czech Connection – Dr Tomi Petr Retires from the Limnological Arena

I first met Tomi [Tomislav] Petr in August 1968 when the two of us were participating in the same post-congress tour following the 17th SIL Congress which had been held in Israel. We were on a boat which was crossing Lake Kinnereth (=Lake Tiberias =The Sea of Galilee) on 22 August when a news flash informed us that Russian tanks had just rolled into Prague, and the Czech government had been deposed. Half a dozen Czechs huddled around the radio with very distressed looks on their faces. The non-Czechs tried to cheer up their troubled colleagues by raising the Czech flag (I still don't know how we happened to have one of these on the boat) to the top of the boat mast. Tomi later told me that it was upside down – unintentionally, but appropriately enough, we had hoisted an internationally recognised distress signal!

The Czech contingent started to agonise over whether or not to return to Prague. Most of them eventually opted to return – some had little option, to have done otherwise would have meant abandoning their families. Tomi was the only one who did not return to Prague for many years (when a very different political climate prevailed). Tomi was immediately in a very difficult position; his passport was about to expire, but it was too dangerous for him to return to Prague and attempt to obtain another one (which he intended to had the coup not occurred) – he was about to become stateless.

Despite the passport problem, he managed to head back to Ghana where he was leader of a team engaged in the Volta Basin Research Project (University of Ghana). In early 1970, Tomi went to Makerere University in Uganda. Here the political climate soon deteriorated and life became very dangerous as the notorious Idi Amin and his murderous army ran amok. Tomi eventually had to flee to Europe where he was given refuge and a temporary job as a limnologist at Lake Attersee in Austria. From here Tomi 'phoned me at Monash University to explain his plight, and, after consulting with my Head of Department, I was able to offer him a position as Senior Tutor. Although this position was not commensurate with Tomi's substantial qualifications and experience, it was the best that we could come up with at short notice, and he was more than happy to accept it. This was the rather extraordinary background to Tomi's arrival at Monash in April 1974.

At Monash, Tomi lectured 3rd year students in limnology, supervised several Honours students, and established a fisheries management course for M.Sc. students. Tomi will be remembered with respect and affection by such limnology Honours students as Wendy Blackburn, Jenny McAuley, Andrea Fletcher (I have deliberately retained maiden names), Sandy Morison, Greg Smith, Russell Tait and Andy Giraud. He will also be remembered by our long-serving ASL secretary, Richard Marchant, who was finishing off his Ph.D. in 1974, and David Morton (former journal editor and now Production Manager with CSIRO Publishing) who was both a student (M.Sc.) and technician when Tomi was at Monash. At the end of his stint at Monash University, Tomi took out Australian citizenship.

In 1977 Tomi left Monash to become Environmental Manager at the Office of Environment and Conservation, Waigani, PNG. He was in charge of designing and co-ordinating environmental studies associated with the proposal to build a large hydroelectric dam at Wabo on the Purari River. In 1980 Tomi left PNG and worked for the next 15 years for FAO in Rome as a Senior Fisheries Resources Officer. After his official retirement in 1995, Tomi continued to act as a consultant for FAO and the World Bank.

I recently (July 2008) spent a week with Tomi in Prague and he informed me that he has definitely written his last limnology paper. His swansong was a very substantial 50-page contribution:
Petr, T. (2006). Dissolved chemical transport in rivers of Papua New Guinea. Acta Universitatis Carolinae Environmentalica 20, 7-57.
His penultimate paper was also a significant contribution:
Petr, T. (2004). Inland fisheries – the global situation. Acta Universitatis Carolinae Enviromentalica 18, 7-34.
Tomi has, of course, an extensive publication list which includes such important contributions as the chapters on the Volta River system in the book *The Ecology of River Systems* (Eds Davies & Walker). He also edited a book on the environment of the Purari River in PNG. Although Tomi is through with limnology, he has not stopped writing, and is presently preparing a book about his travel experiences in central Asia (that cluster of countries whose names end in "stan").

Tomi lives most of the time (remember, he is an Australian citizen) with his wife, Mary, in Toowoomba (e-mail address: tomipetr@bluemaxx.com.au), but he still retains a flat in Prague which he usually visits during the northern hemisphere summer. Past students or colleagues may wish to re-establish contact with him.

Ian Bayly, Killiecrankie (e-mail: iaebayly@activ8.net.au).

ASL MINUTES

ASL EXECUTIVE TELECONFERENCE, 14 NOV 2008

Present: R.Marchant, S.Screiber, D.Baldwin, D.Ryder, B.Downes, P.Laceby, F.Sheldon, B.Zampatti, S.Bunn

1. Tenders for running society administration and annual conference: two tenders were received from the three companies (ASN Events , PAMS [Professional Association Management Services], TRI [The Regional Institute, Sydney]) that were asked to bid. Annual administration and congress costs from ASN and TRI were similar. After some discussion it was decided to provisionally accept the ASN quote but R.Marchant was asked to contact PAMS to determine whether they were going to quote. A quote from PAMS was finally received a week later and was somewhat below the other two quotes.

2. FASTS and Science Meets Parliament (SMP): D.Baldwin proposed that he contact FASTS to discuss what the society gets for its annual subscription to this lobby group. Currently the ASL is paying $6.25 per member to belong to FASTS. It was suggested that he talk to the current leader of the aquatic sciences group within FASTS – this is Pat Hutchings from AMSA- before approaching FASTS. It was acknowledged that FASTS lobbies governments on general science matters and science eduction rather than on specific matters that may be of direct interest to the ASL.

   Recently $2000-3000 has been spent sending ASL members to SMP, which was considered a very worthwhile event by those executive members that had attended. This was an opportunity to discuss with a member of the federal parliament a specific issue of relevance to the ASL. The number of delegates that the ASL could send was not known but D.Baldwin will contact FASTS to find out. If three can be sent then it was suggested that two students and a senior ASL member could be sent next year. An agenda for the delegates will be discussed at the next teleconference.

3. D.Baldwin proposed that the web master and the newsletter editor be invited to telconferences. This was unanimously agreed and R.Marchant will contact them inviting them to attend as observers without voting rights.

4. Engaging students: D.Baldwin had received a letter from M.Grace suggesting that students be largely responsible for running ASL conferences. This suggestion was rejected but it was hoped that at least some students could be on conference organising committees. A road trip to Alice Springs (2009 congress venue) has been suggested but P.Laceby (student rep) indicated that a more practical suggestion may be to run such a trip around the Alice Springs region for students that attend the meeting.

5. The next teleconference will be held at 12.30pm on Tuesday, 3 Feb 2009.

ASL EXECUTIVE MEETING, MANDURAH, 30 SEPT 2008

Present: S.Bunn, R.Marchant, L.Sim, S.Schreiber, D.Ryder, D.Baldwin, B.Zampatti, F.Sheldon

1. Conference organisation and ASL administration: two possible providers of these services have been found in Melbourne. S.Schreiber and R.Marchant will further investigate these organisations with the aim of employing one to take over the routine administration of the society and the annual congress.

2. Current finances: S.Schreiber recommended that the society raise its fees. At present expenses are $30 per member but income is only $27. She suggested fees for ordinary members rise to $75 and for students to $35. This was agreed by the executive. D.Baldwin suggested we provide extra services for members such as an on-line journal. Specialised workshops at congresses were also suggested as these have been successful for other societies e.g. NABS.

3. Budget planning: S.Schreiber would like to draw up an annual budget showing the amounts likely to be spent on the newsletter, student travel awards, the WDW travel scholarship and other predictable expenditure. Such a budget will enable more effective planning.

4. ASL medal: R.Marchant noted that two aspects of the current rules (revised in 1989 and published in ASL newsletter vol 36, number 2) for awarding medals need changing. These concern the length of time a nomination is valid for and the requirement for the medal winner to publish their Jolly address. The latter has never occurred, while the former is unduly burdensome because it means nominators have to keep revising their nominations. The executive decided that nominations should be valid for three years and that the requirement to publish the Jolly address be abandoned. R.Marchant will publish these amendments in the newsletter.

5. ASL constitution: the auditors have suggested that a sentence in section 12 (financial conduct) of the constitution be changed. This was agreed and will be voted on at the AGM in 2009 after notification to members at this year's AGM.

6. Other matters: S.Bunn noted the fall in membership and attendance at meetings and suggested that the ASL attempt to hold joint conferences with other aquatic societies e.g. Aust Soc. Fish Biol. D.Baldwin will pursue this matter as president. It was noted that a special issue of Marine and Freshwater Research in 2009 is to be dedicated to the memory of Peter Cullen. A.Boulton will make an announcement about this during the current congress.

Member's Musings

In an open letter to the society in the last edition, ***Mike Grace*** *reviewed his concerns that that conference was moving too far away from our traditional, informal style of meeting organised by the participants.* ***Belinda Robson*** *replies... (Ed.)*

Dear all,

I thought I would respond to Mike Grace's letter in the last newsletter on the use of conference organizers and postgraduate students. For those of you who don't recall, I chaired the organizing committee for the Joint ASL/NZLS Congress in Warrnambool in 2003. The phrase "a lot of work" does not even begin to encompass what is required from such a venture. Management of hundreds of registrations and abstracts with no proper database is extremely difficult. Management of the budget requires someone with experience in that area and often with signing authority within the hosting institution (if there is one). Members expect a professionally organized conference, they expect everything to run smoothly. They expect the registration desk to be staffed at all times, for example. Organizers need the support of web access, a networked computer system, accounts systems and the capacity to swiftly move to plan B when disaster strikes. Students often do not have access to these kinds of resources. It appears that the lack of disasters at recent congresses may have made organization look a lot easier than it actually is. In addition, ASLers no longer volunteer to host congresses because of the expectation that they will do it all themselves. Mind you, I did think that Mike's letter was the most convincing offer to host a conference that I've seen from an ASLer in recent years! Looks like the 2010 congress will be held at Monash! All in favour say aye...

To return to the substantive point of Mike's letter: the shortness of the dinner and the limited student involvement. I agree entirely that we should address these, but this does not mean abandoning professional organizers. What it does mean is having an organizing committee that includes students and that provides strong direction to the professional organizers. This will include checking venues and menus and prices and the timings of things. It is up to us to make it clear to organizers that a certain time is needed for an event like a dinner, or to ensure that the dinner is held in a place that people can find and depart from in their own time. Indeed, such a committee could comprise mostly students and have 1 or 2 old fuss pots on it to ensure that time-honoured ASL conference traditions are upheld in among the new and radical ideas. I would add that the 2008 conference was organized in a bit of a rush, and so all the bells and whistles were not possible – yet it was still a very enjoyable conference. With a bit more time allowed, as is usual, the organizing committee will be able to ensure that the professional organizers fit in with our expectations.

Let's not throw the baby out with the bathwater. We can use conference organizers AND have things the way we want them, without burning out ASLers and WITH student involvement.

Best wishes to all and a Merry Christmas, **Belinda Robson**

REPORTS FROM THE TRENCHES

FISH ECOLOGY AT UNIVERSITY OF OTAGO

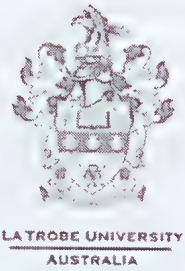
Fishy research at Otago continues apace. **Gerry Closs** and visiting Canadian researcher **Dr. Alyre Chiasson** are examining microhabitat use in Eurasian perch, specifically exploring the question, is microhabitat use of predatory fish in small lakes is structured, i.e. do they feed from fixed position, exhibit hierarchical use of space, have preferred night resting locations, etc, etc.? Eight perch have been loaded with internal transmitters and are being tracked intensively over the next 2 or so months.

Three current PhD students, **Andy Hicks, Adrian Lill** and **Nicholas Dunn** can see the light at the end of the PhD tunnel. Andy has recently completed microchemical analysis of a large number of otoliths: initial results are indicating extensive and complex patterns of facultative diadromy across galaxiid speciies around New Zealand. Adrian Lill is finding that the opening and closing of estuaries is a key driver of fish and invertebrate community structure. Nicholas Dunn's work indicates hydrological variation is a strong influence on galaxiid morphology.

Leonie Kücholl is continuing to work towards her PhD on brown trout behaviour. Observations of feeding behaviour in streams indicate that juvenile fish either feed from fixed positions or move continuously. In a series of experiments, Leonie will test whether this behaviour is flexible and which option is advantageous under constant or varying food supplies. **Abbas Akbarispasand** is currently monitoring movement and growth in banded kokopu across four streams. Fish are tagged and recapture rates are high indicating relatively limited movement for most fish, at least over the winter months. **Jeff Vanderpham** has upgraded his MSc research to a PhD, examining morphological variation in common bullies and how it influences their ability to detect and capture prey in flowing and still-water habitats. **Rasmus Gabrielsson** is continuing to explore patterns of migration amongst upper Clutha trout. Microchemical analysis of juvenile trout from differing catchments indicates clear differences in trace element signatures between sub-catchments thus potentially allowing tracking of migration of adult fish. **Beate Bierschenk** is close to completing a year of sampling mysid (honorary fish!) populations in the lower Taieri River finding clear evidence of partial spatial segregation amongst the 4 species inhabiting this system.

Gerry Closs

LA TROBE UNIVERSITY AT ALBURY-WODONGA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AND ECOLOGY



TRIN Aquatic Macroinvertebrate Project

The aquatic macroinvertebrate project component of the Taxonomy Research and Information Network is progressing well at the Albury-Wodonga. Molecular and morphological analyses of the Australian Baetidae, Caenidae and Coloburiscidae have confirmed many of the presumptive taxa and demonstrated a number of cryptic species. Do not fear additional species are ones not previously recognised and will not drastically alter outcomes of previous work. However, there are a number of complexes which are showing clear geographical separations, although very similar morphological character expression. Implications of this work is that we will have better characteristics to enable identification.

Jeff Webb has continued to push back boundaries in the molecular area and has managed to assist **John Hawking** in associations of adult and larval Crambidae (used to be called Pyralidae). This has already put question marks against some of the generic placements of the adults. John continues to enjoy his PhD and spends lots of time in the field collecting larvae and adults and bringing me back shovel loads of adult caenids. Information on the project and TRIN can be obtained at http://www.taxonomy.org.au/ and http://www.latrobe.edu.au/deme/aw/

On the TRIN site there is a WIKI into which we place developing keys which I encourage those interested to register and other outcomes of the research. If you register you can comment on the pages on the WIKI etc. All comments welcome.

The taxonomic workshop in February is well into the planning stage and should be a very useful addition to the keys to Aquatic invertebrates. In addition to the presentations there will be a Lucid key to Chironomids made available by Peter Cranston which will compliment the key to larvae given by Chris Madden. I look forward to seeing everyone at the workshop.

Details of the workshop are available at:
http://www.latrobe.edu.au/deme/aw/taxonomicworkshop.htm
and see the announcement for the Taxonomic Workshops in this issue.

Any budding aquatic insect taxonomists interested at honours or post graduate level interested in joining the CERF group at La Trobe University at Albury-Wodonga can contact Phil Suter at p.suter@latrobe.edu.au .

Adrian Clements and **Stephanie Suter** are doing their honours projects with **Ewen Silvester, Gavin Rees, Roger Croome** and **Phil Suter** in the alpine peatlands and streams on the Bogong High Plains. Adrian's project is investigating macroinvertebrate communities associated with the bryophyte communities of the peatlands and Steph is working on aquatic hypomycetes (fungi) in the alpine and montane zones.

Phil Suter

FAREWELL TO THE RIVER LABORATORY, UNIVERSITY OF ADELAIDE

The final group of PhD students supervised by Assoc Prof **Keith Walker** are completing their projects, and the long tradition of the River Laboratory at the University of Adelaide will come to an end. The final four students are **Michael Hammer, Anne Jensen, Nadine Kilsby** and **Scotte Wedderburn**. Their projects have naturally focused on the River Murray, looking at very diverse topics in a very diverse and currently very stressed ecosystem.

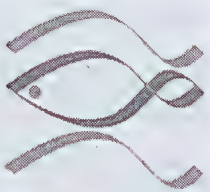
Michael's thesis, titled 'A Molecular Genetic Appraisal of Biodiversity and Conservation in Freshwater Fishes from Southern Australia' provides ecological and genetic information regarding several native fish species, including the threatened Yarra pygmy perch, southern pygmy perch and southern purple-spotted gudgeon, which will assist conservation.

Anne's thesis is titled 'The Roles of Seed Banks and Soil Moisture in Recruitment of Semi-Arid Floodplain Plants: The River Murray, Australia' and investigated the key processes for recruitment of river red gums, black box and lignum. In particular, Anne sought information on the critical conditions of soil moisture for seedling survival, so that limited environmental watering could be targeted for greatest effect.

Nadine combined engineering and ecology in her thesis, titled 'Reach-scale spatial hydraulic diversity in lowland rivers: characterisation, measurement and significance for fish'. Her work contributes to better understanding of the relationship between flows and fish movement and distribution in local habitats.

Scotte's thesis is titled 'Ecology and Conservation Biology of the Murray Hardyhead Craterocephalus fluviatilis McCulloch, 1912'. Scotte's research is actively contributing to the application of emergency measures to save habitat for this threatened species. These last four theses complete a long line of Honours and PhD studies under the guidance of Keith Walker, all contributing to better scientific knowledge of the River Murray ecosystem. Interest in the River Murray will continue through other research groups, and research on water issues is being actively promoted by the Water Research Cluster of the University of Adelaide.

HYDROBIOLOGY CONSULTING



The past year has been a very productive one for Hydrobiology, with our team involved in a number of large-scale projects overseas in PNG, Indonesia and the Philippines, as well as a range of projects on the domestic front.

2008 saw us begin a major scientific investigation in the Sepik and Ramu river basins in PNG to assess the impacts of an exotic fish stocking programme undertaken by the PNG government in the 1990s. This study is being carried out in partnership with the National Fisheries Authority and a range of private entities including Xstrata. The study involves mobilising six field teams to conduct over 60 days of fish, macroinvertebrate, water quality and sediment sampling.

Our Perth office extended their work for the Tampakan gold-copper mine, performing baseline studies for a proposed port in Mindanao, Philippines. This involved water

quality monitoring and an assessment of fish distribution and biomass using Hydrobiology's BIOSONIC hydroacoustics unit. Monthly monitoring of river water quality and fish and macro-invertebrate communities in upland stream habitat near the proposed mine site has also continued.

On the domestic front, 2008 saw us carry out studies in the north-west of Australia, such as the hydroacoustic fish and fish habitat baseline surveys for a proposed port development near Dampier. We have also undertook a range of fish and macroinvertebrate surveys in north Queensland, including several studies near Weipa and one study near Townsville.

2008 also saw some team changes. **Carla Littlejohn** has replaced **Adrian Flynn** as Manager of the Ecology and Impact Assessment section. Adrian has absconded to Melbourne to complete a PhD on deep sea fish communities. We wish him well. We also welcomed Ida Vincent as a replacement for Michelle Hobbs, who is on maternity leave with newborn Oscar. The Perth Office welcomed **Lachlan MacArthur** as a full time employee following the submission of his PhD. Congratulations Lachlan!

Jamie Corfield

AQUATIC ECOSYSTEMS UNIT, DEPARTMENT OF NATURAL RESOURCES AND WATER LONG POCKET LABORATORIES, INDOOROOPILLY, QUEENSLAND

It is that time of year again – the Christmas Silly Season – with many of our staff heading away on holidays and so the workplace is getting quiet and social outings are getting busier. We have also had a number staff leave the unit in recent months making it even quieter. **Diane Conrick** has left the unit (initially on holidays) and sunny Queensland for the more southerly climate of Canberra. Diane was the first staff member of the unit (after Satish) when the Monitoring River Health Initiative was our sole project. **Bill Senior** has taken over Diane's role as project leader for the Qld FARWH project. **Glen Moller** has moved to the dark side on a permanent basis after being on secondment to policy for a number of months. **Skye Cameron** and **Jessica Pettit** from the EHMP team have also moved on, with Skye about to start a PhD at University on Queensland on lizard thermal regulation. **Louisa Davis** has gone off chasing gold bands and cold weather and has started living in an ex-prison cell in Melbourne.

With this many staff leaving we have also have new staff joining the unit. Ryan Woods and Sarah Rogers have joined the FARWH project and Sara Clifford has joined the State Stream and Estuary Assessment Program.

This year the unit has a significant increase in fieldwork activity with the start of the FARWH project which sampled in the Pioneer and Burdekin catchments in May-June and SEQ in October; the SEAP project which sampled across Qld's Central Freshwater Biogeographic Province in May - July; the ongoing freshwater EHMP in SEQ and a number of field trips for eWater projects and Qld's Environmental Flows Assessment Program (EFAP). As a result of this and more fieldwork planned for 2009 we have engaged the Rescue Training Group to undertake a Water Safety training course for the unit. The training targets "swiftwater" (not that much of it across Qld in the recent past) to show staff what problems could eventuate in river conditions and how to cope with swimming or traversing flowing water – well worth the investment.

After all the fieldwork the number of macroinvertebrate samples having been stacking up in the lab so there have been no seats or microscopes spare for a number of months.

Other happenings during the last few months have included the FARWH sampling design workshop coordinated by Wayne Robinson from Sunshine Coast University and having attendees from all the country's FARWH projects. Jaye and Jon attended the MDBC refugia workshop to discuss their work on the waterholes as refugia work undertaken as part of the eWater CRC and EFAP.

Peter Negus

MACKAY REGIONAL BIOLOGISTS (QUEENSLAND DEPARTMENT OF NATURAL RESOURCES & WATER)

Queensland Government

Our team (Bernie Cockayne, Kate Engledow & Luke Galea) is currently working on projects in several catchments across the Central West Region as a part of our Environmental Flows Assessment Program...

- We have been monitoring the Pioneer River population of Freshwater Catfish (Tandanus tandanus) to assess their breeding behaviour and how this relates to water quality, channel morphology and hydraulic habitat. We monitored the same population from the onset of their nesting period, and through their spawning and recruitment phases; observing the adults, and successfully sampling nests for eggs and larvae. Our plan is to replicate this research in upcoming years to help us predict the response of the population to changes in hydrologic regimes across the Pioneer Valley.

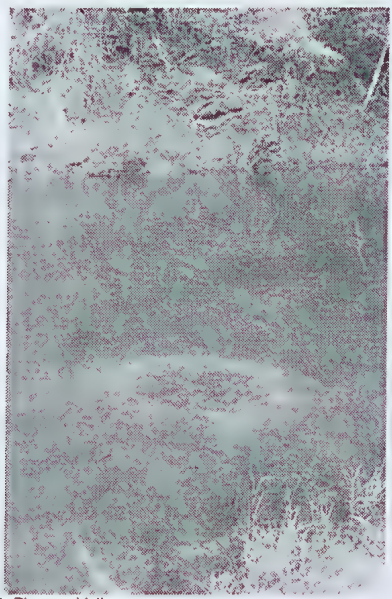


Figure 1: T. tandanus nest, Pioneer Valley

Figure 2: T. tandanus larvae at approx. 48hrs post-hatching

Our annual 'event-based' monitoring in the Fitzroy Basin is underway, focussing on the timing and location of the spawning and recruitment of two endemic flood-cue spawners: the Fitzroy Basin Yellowbelly (Macquaria ambigua oriens) and the Leathery Grunter (Scortum hilli). Their response to the first major flow event of the wet season and subsequent flows of similar magnitudes will be measured through the collection of eggs and larvae; with the aim of further refining knowledge-gaps on the reproductive habits of these species.

Upcoming projects include:
1. Mapping significant waterholes in the Whitsunday catchment, and using the data to create models which predict available fish habitat under particular hydraulic scenarios
2. Investigating the flow requirements of diadromous fish species with the Pioneer Valley (e.g. Barramundi, Sea Mullet), including monitoring their use of a fish-lock fish way
3. Designing and implementing an acoustic telemetry network to track the movements of the Fitzroy Basin Yellowbelly (Macquaria ambigua oriens) and the Leathery Grunter (Scortum hilli) throughout the Fitzroy Basin

Kate Engledow

AUSTRALIAN CENTRE FOR TROPICAL FRESHWATER RESEARCH, JAMES COOK UNIVERSITY, TOWNSVILLE

Dom Loong has returned to ACTFR after a stint working at Charles Darwin University. Mirjam Maughan has left to join the wetland mapping team at the Environment Protection Agency and Alan Webb is moving to Brisbane.

Damien Burrows and **Colton Perna** recently attended the INTECOL Wetlands conference in Cuiaba, Brazil, with Damien staying on for the Pantanal Scientific Expedition, a 7-day cruise of scientists from around the world through the Pantanal wetlands, a system so extensive, its dwarfs anything on offer in Australia. A Brazilian TV film crew was there to make a documentary of the expedition and to highlight the international importance of the Pantanal wetlands and further their protection from the many threats they are facing.

Jon Brodie was lead author on a consensus statement by 13 leading scientists on the state of science in relation to terrestrial runoff to the Great Barrier Reef, its effects and management. The statement, available at:

http://www.reefplan.qld.gov.au/publications/scientific_consensus_statement.shtm was launched at the recent Reef Summit by Qld Premier Anna Bligh and attended by Federal Environment Minister Peter Garrett. Both **Jon Brodie** and **Eric Wolanski** authored separate chapters in the recent textbook "The Great Barrier Reef, Biology, Environment and Management"

John Dowe has signed a contract with CSIRO Publishing to publish his book on Palms of Australia during 2010, also recently completing the last field trips to Cape York and NW Western Australia to collect palm seeds required for the book.

Damien Burrows, Colton Perna and **Jason Schaffer** recently participated in a large exercise organized by the Queensland Department of Primary Industries and Fisheries to apply rotenone (a fish poison) to 5km of Eureka Creek, a tributary of the Mitchell River, Gulf of Carpentaria. Tilapia, a serious exotic pest from Africa was found in Eureka Creek in January this year and the purpose of this exercise was to eradicate tilapia from the creek to prevent them spreading throughout the Gulf of Carpentaria river systems. Both species of tilapia known from north Queensland were found during the exercise. It's too early to call this treatment a success just yet but no tilapia have been found there yet. Monitoring of the area is ongoing.

Colton Perna also assisted Qld DPIF and the Southern Cape York Catchments group with surveys of the Endeavour River, Cooktown, which have found that tilapia, confirmed as established there in December 2007, have spread from their previously known sites and now occupy much of the river system.

Damien Burrows and Colton Perna recently surveyed Cape York and some islands of Torres Strait for exotic fish species. Fortunately, none were found around Cape York (north of the Jardine River), but we did confirm an established population of mosquitofish on Thursday Island and climbing perch (from SE Asia) on Saibai Island. These are the first specimens of these fish recorded from there and the first climbing perch caught in Australian waters.

In September, Brad Pusey from Griffith University, joined Colton Perna in surveying fish across the northern half of Cape York and collecting samples for various genetic studies.

Damien Burrows

RESOURCE MANAGEMENT AND GEOGRAPHY (THE DEPARTMENT FORMERLY KNOWN AS SAGES, AND BRIEFLY SOCIAL AND ENVIRONMENTAL ENQUIRY), THE UNIVERSITY OF MELBOURNE.

THE UNIVERSITY OF MELBOURNE

Barb Downes, Jill Lancaster (University of Edinburgh) and **Alena Glaister** have commenced the second phase of an ARC project –*Resource patchiness, dispersal and species co-occurrence: an experimental and levels-of-evidence approach in some lowland streams.* The study area is in Seven Creeks and Hughes Creek, north-east of Melbourne. During 2008 we carried out three collecting trips to assess dispersal of aquatic invertebrates using sticky and light traps for adults, and drift nets for stream capture. The material is being processed by Alena, with assistance from **Al Danger** (soon to head north to the wilds of Darwin) and **Wim Bovill**.

Congratulations to **Jane Catford** who recently submitted her PhD thesis entitled "*Plant community composition and exotic invasion in Murray River wetlands*". She is looking forward to starting a postdoc with **Brendan Wintle** and **Peter Vesk** in the Botany department at Melbourne University in 2009. Of the remaining students in the Downes Lab, **Wim Bovill** is just starting his first field season and **Ashley Macqueen** is entering his second. Wim is conducting his research into the effects of spatially variable fecundity on population dynamics of caddisflies in the Acheron catchment, while Ashley is focussing on the egg stage of caddis in the Strathbogie Ranges.

Angus Webb has been continuing his work applying Bayesian techniques to all manner of environmental data, trying to change the world one limnologist at a time. One major avenue for this work has been the Victorian Environmental Flows Monitoring and Assessment Program (VEFMAP), being run in partnership with DSE through Sabine Schreiber and Victorian CMAs. Through the eWater CRC research portfolio, he has also been messing around with trying to apply Network Theory and numeric optimisation to problems of restoration planning within stream systems.

Chris Walsh has settled into Melbourne Uni, continuing to work on several urban related projects, including a review of management options for aquatic animals in urban streams (with **Al Danger**); large-scale modelling of urban impacts on streams (with Joshphar Kunapo); and the restoration of Little Stringybark Creek (outer east Melbourne) through catchment-scale stormwater retention, a project with many components, including a recently acquired 5-year ARC grant to test the success of the restoration (with **Darren Bos**, **Tim Fletcher** [Monash], and even less limnologically inclined collaborators in Melbourne Water and DSE).

Until recently, both Chris and Angus have been working under the added burden of ridiculous Movember moustaches. But RM&G, post-Movember and (even more traumatically) post-Melbourne-model-induced-restructuring, is ending 2008 a happier place than it began.

Chris Walsh

ECOHYDROLOGY SECTION, WATER ASSESSMENT BRANCH, DEPARTMENT OF PRIMARY INDUSTRIES AND WATER, TASMANIA

Tasmania
Explore the possibilities

While **Danielle Hardie** has been away on maternity leave (it's a boy!), **John Gooderham** has been diligently progressing the monster that is the Conservation of Freshwater Ecosystem Values (CFEV) Project. This has largely involved finalising the cooperate-user interface for the CFEV database and the technical report which details how the database was constructed. John has also been busy providing database training to user groups. For more information about the CFEV Project, check-out the project's recently revamped website: (http://www.dpiw.tas.gov.au/inter.nsf/ThemeNodes/CGRM-7JH6CM?open).

The environmental flows team has been involved in work in a few catchments in Tasmania over the past year. Early in the year, **Chris Bobbi** and **Scott Hardie** finished an environmental flows assessment for the Ringarooma catchment in the northern of the State, the second assessment to have employed the recently developed Tasmanian Environmental Flows Framework (TEFF). Since then, Chris, Scott and **Justine Latton** (before she recently left on maternity leave; it's a girl!) have been largely directing their attention to the heavily modified Macquarie

catchment (our little Murray Darling Basin!). Their work in this catchment aims to assess the condition of the Macquarie River, and some of its major tributaries, by replicating work undertaking in early 1990s by **Peter E. Davies** and **Paul Humphries** (Freshwater Systems) – this is focusing on macroinvertebrates, macrophytes, fish and freshwater mussels – and preparing and environmental flow assessment which will focus of preserving high flows.

Scott and Adam Uytendaal continue to be drawn into the ongoing issues surrounding the management of the water levels in the ecological important lakes Crescent Sorell and flows in Clyde River– this is not an easy task give the drought conditions that have prevailed in the Clyde catchment in recent years and the political pressure and media security this catchment continues to receive locally. To assist with this, during winter-spring 2007, Scott managed a project which conducted a water level manipulation in the Crescent-Sorell system to enable populations of the endemic and threatened fish, the golden galaxias, to spawn. This project was a success; however, water levels in these lakes were too low during 2008 to allow such an approach to be used and, at this stage, next season is also not looking flash either.

After **Danielle Warfe** left for more wet and humid pastures in Darwin (TRaCK project), **Adam Uytendaal** has taken the helm of TEFlows project. With ample support from **Greg MacDonald** and **Mike Male** (who also joined the project in late 2007), this project has just finished its mammoth core field work component – which has involved Greg being in the field for the equivalent of about 6 months of his 2 years with DPIW! Adam, Greg and Mike, now have the task of crunching the numbers and writing up the many stories that will no doubt come from this all-encompassing project!

Hydrologist, **Shivaraj Gurung** and **Suzanne Witteveen**, continue to develop and refine hydrological models for catchments across Tasmania. After her overseas trip, Suz has recently finalised a hydrological report for the Macquarie catchment which will help Chris and Scott with their environmental flows assessment and assist the water management planning process for this catchment.

The river health team continues to conduct the seasonal AusRivAS monitoring in rivers around the State and is looking to incorporate elements of the Tasmanian River Condition Index (TRCI) into this seasonal work once it is finalised. **Tom Krasnicki** and **David Horner** are also looking into refining and updating the AusRivAS models for Tasmania by fleshing-out the issuing associated with the current models in discussion papers. Tom also continues to provide assessments of the condition of catchments to assist environmental flows assessments. Dave is currently cracking the whip in the lab, which is humming, with new recruits **Kate Keegan, Ivana Karanovic, Melanie Evans** and **Adrian Eberle**, and the old sage **David Spiers**, processing a backlog of macroinvertebrate and stable isotope samples for various studies.

Martin Read and **Bryce Graham** having been busy (as per usual!) with many trips to the big island for such things as National Water Accounting Workshops, Aquatic Ecology Task Group meetings, River Health Contact Group meetings, etc. Locally, amongst other things, Martin and Bryce have been involved in the Basslink Gordon River work, the Sustainable Yields Project and the Improving Water Information Program administered by the Bureau of Meteorology.

Scott Hardie

SCHOOL OF ZOOLOGY, UNIVERSITY OF TASMANIA, TASMANIA

The UTas freshwater lab has again been fairly quiet this year. The extended drought in eastern Tasmania has added a few challenges to several projects, and to undergraduate practical exercises as well!

Lavy Ratnarajah came to us from Kuala Lumpur for an Honours project on leaf breakdown in small streams around the Hobart area. After livening up the lab and starting a new coffee culture in the School, she has now moved on to the once mighty Murray River, where she might even need to wear waders occasionally. Raylea Parr spent a semester with us on an undergraduate project on shredder mouthparts, and has now moved on to an Honours project in Agricultural Science, looking at parasites on terrestrial bugs.

Tom & Ivana Karanovic have been using our lab for a base for their taxonomic work on microcrustaceans.

It has finally rained in the Macquarie River catchment, so Anne Watson has returned from suspension to try to complete her PhD research on organic matter dynamics under regulated/unregulated flows. Hopefully the rivers will keep flowing for a couple more months.

Dr Leon Barmuta has been promoted to Associate Professor – congratulations Leon!

Joanne Clapcott, who is now working at the Cawthron Institute in New Zealand, was awarded a Dean's Commendation Award for Outstanding 2007 Doctoral Theses for her excellent study of metabolism in headwater streams. Her primary supervisor was Leon Barmuta. Her research has pioneered the application of measures of ecosystem function in the assessment of forestry practices on small, headwater streams. While small, these streams can comprise 40% or more of the stream network in a catchment and many are naturally species-poor. Jo's thesis provided a number of alternative measures of stream "health" that focus on the functioning of streams rather than their biodiversity values.

Anne Watson

AUSTRALIAN WATERLIFE, TASMANIA

The past 12 months have been fairly busy for the Australian Waterlife laboratory. I moved down to Tasmania over the 2007-08 Xmas period, due to family commitments. As a consequence the contact details for Australian Waterlife also changed (see the website below).

Since February 2008, there have been a number of commitments analysing aquatic microfaunal samples for several universities across Australia, consultancies in Victoria, New South Wales and Queensland; plus State Government Agencies in Victoria and Tasmania.
Just before the move down to Tasmania, the Web Host Provider for Australian Waterlife suffered a major cyber attack on its electronic systems by hackers from

overseas (Russia). This resulted in the web site for Australian Waterlife being compromised with those of a lot of others. This took quite a few months to resolve with that Web Host Provider. Further compounding the problem was the move to Tasmania.

However, the web site plus email facilities for Australian Waterlife are now up and running again with a different Host and a new Email Provider. To those people who tried and failed to contact the lab during this period, I offer my sincerest apologies for the difficulties you may have experienced.

A valuable lesson was learnt. Hopefully the current site www.australianwaterlife.com.au will be safe from such antics.

Robert Walsh

TASMANIAN ASL PUB SEMINAR SERIES

During 2008, the Tasmanian branch of the ASL held a pub seminar series. The series, which ran from May to October, was well attended with a healthy assemblage of people from different organisations attending and presenting. Each pub night featured two presenters who gave talks on a central theme. Some of the highlights included a dazzling cloud seeding display in tucker box freezer by Christina Nebel (Hydro Tasmania) (real science, in the pub, it doesn't get better than that!), a story about platypus using culverts as playgrounds by Sarah Munks (Forest Practice Authority), and a discussion session about local wetland issues held by Margater Brock and Krystyna Saunders of the University of Tasmania. A similar series is planned for 2009, with pub nights on the first Monday night of each month between May and October. So, if any of our mainland colleagues find themselves in Tassie during this time and are interested in a night at the pub (with some science on the side), please contact me for further information about the 2009 seminar series.

Scott Hardie

FRESHWATER ECOLOGY, ARTHUR RYLAH INSTITUTE FOR ENVIRONMENTAL RESEARCH, DSE VICTORIA.

State Government Victoria Department of Sustainability and Environment

The aquatic invertebrate and wetland ecology team has been busy with a mixture of field work and office based work the past few months. **David Bryant** has been doing a brilliant job coordinating and undertaking a very field intensive growling grass frog project across western and central Victoria. Thanks go out to the many assistants that have helped Dave recently. The project, which was initiated by **Michael Smith** who has recently taken up a position on Christmas Island, includes frog and tadpole surveys in and near farm dams to help understand detectability and develop a habitat model for the species. Some dams will be manipulated to enhance frog habitat and refugia. **Di Crowther** recently returned rejuvenated from long service leave in South America (where she had a fantastic time!). She has just completed Sustainable Rivers Audit sampling in the Wimmera regions of Victoria and will soon be commencing a study on the threatened damselfly, Hemiphlelbia mirabilis. Di, together with **Shanaugh Lyon** and **Phil Papas** recently published a report on the findings of alpine stonefly surveys following the 2006 fires in parts of Victoria - see

the ARI website for this and many other reports: www.dse.vic.gov.au/ari/reports. Phil and Shanaugh have continued to work on the Victorian Index of Wetland Condition (IWC). A report on the second stage (testing and information management) will be completed shortly. Testing included an expert opinion exercise undertaken by wetland ecologists around the country - their assistance is greatly appreciated. The IWC Data Management System, i.e. 'the database', is being upgraded at present and a photo guide to wetland ecological vegetation classes is nearing completion.

David Crook and **Jed Macdonald** from the Fish Ecology and Assessment team have recently published the findings of fish assessments that formed part of a program to restore the natural and cultural values of Lake Condah in western Victoria, in collaboration with the Winda Mara Aboriginal Corporation. Important findings were the high abundance and species diversity of native fish species compared with introduced fish species, and the discovery of relatively widespread and abundant populations of the threatened Yarra Pygmy Perch and Dwarf Galaxias. A major outcome of the project was skill sharing between researchers and members of the local indigenous community. Members of the Winda Mara Corporation have been trained in aquatic research, and ARI staff have gained an insight into indigenous issues and the cultural heritage of the Lake Condah region. Funding has been secured through the Glenelg-Hopkins Catchment Management Authority tocontinue the fish tracking component of the study. See the ARI website for more information and a report on this project: www.dse.vic.gov.au/ari (research themes, wetland health and ecology).

Charles Todd (Ecological Modelling and Data team) has recently completed a project for the Murray Darling Basin Commission - Murray cod modelling to address key management actions. A report has been prepared for the project, which is expected to be released by the Murray Darling Basin Commission in early 2009. This project has developed a population model for Murray Cod to assess impacts of threats and recovery options. The model and management scenarios to be explored were developed through a highly inclusive and consultative workshop process that involved modellers, fish ecologists, fisheries scientists and management personnel. The outputs from modelling management scenarios, together with additional data collection and inputs (e.g. creel surveys) will provide a solid basis for improved management of Murray cod populations which will assist in ensuring its sustainability. Changes in angling regulations provide an opportunity to test predicted outcomes through appropriate monitoring.

Phil Papas

MONASH FRESHWATER ECOLOGY RESEARCH GROUP, SCHOOL OF BIOLOGICAL SCIENCES

We at Monash are looking forward to the new year when **Professor Jenny Davis** and **Dr Jill Lancaster** will be joining us. It has been a year of change with **Sam Lake** retiring (but still with us as an emeritus), and a cavalcade of students and visitors through the lab.

Two new research projects have been funded, an ARC Linkage addressing the effects of carbon farming on streams (led by **Ross Thompson**) and a NZ Marsden Fund supported project on habitat compression (**Ross Thompson** and **Angus McIntosh**).

We have seen the completion of **Beth Wallis'** (Sam Lake) PhD in recent months (congratulations Beth), and Honours students **Darren Gilling** (Thompson/Reich) and **Erinn Richmond** (Thompson/Grace) both completed their dissertations and performed with distinction. **Karen Cooper** (Sam Lake, Ralph Mac Nally and Gerry Quinn) is in the final stages of her ISC study, but will shortly head off overseas with her new husband to live in the US (congratulations Karen). **Susie Ho** (Bond/Thompson) has been in the midst of picking samples and SIA processing of her food webs from the Ovens floodplain pools where she has been finding interesting interactions between carp gudgeon and Gambusia. **Mardiana Ali** (Thompson/Grace) and **Sam Imberger** (Thompson/Grace) are both in the middle reaches of their PhDs, with ambitious field programs planned. **Elise King** is continuing her thesis work under the supervision of Ross, Sam and Paul. Downstream (REALLY downstream) effects of urbanization on streams have been in Ross' thoughts lately, with **Alissa Monk** commencing her PhD work on mercury contamination of dolphins in Port Phillip Bay.

Paul Reich and **Sam Lake**'s ongoing MDBC-funded work on the effects of riparian revege on lowland streams has now been joined by soil ecologist **Tim Cavagnaro**, and has been assisted as ever by the ongoing work of **Matt Johnson** and **Thomas Daniel** (ie the people who do the ACTUAL work). **Elisa Rawlings** and **Kay Morris** continue their work (with Ross and Ralph Mac Nally) on Gippsland wetlands and have been joined by Honours students **Johanna Laurant** and **Jenny Mcleod**. **Damien McMaster** together with Paul, Sam and Nick continue to work on the Broken-Boosey system.

Ross Thompson

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